

**Note:** Throughout the year *Kentucky Energy Watch* will be providing a series of "Special Editions" focusing on energy topics of interest to our readers. This edition provides an overview on energy bills for Kentucky's K-12 public schools. All data are from the Kentucky Department of Education and U.S. Department of Energy, Energy Information Administration.

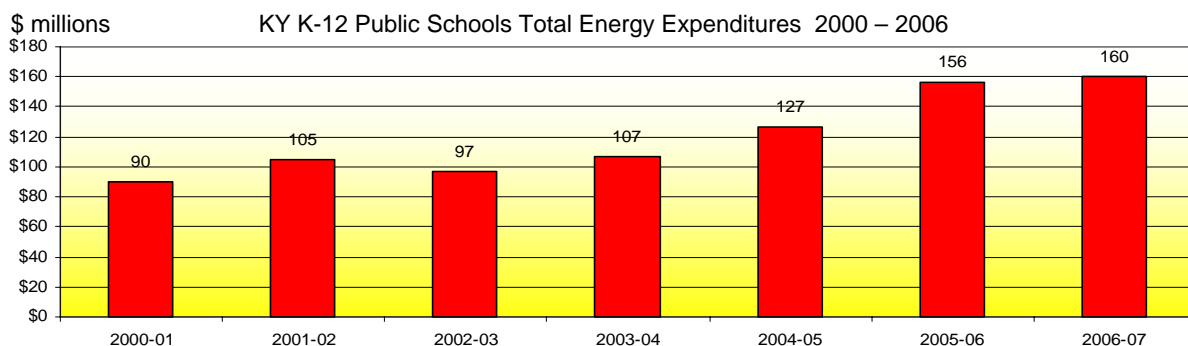
## School Energy Costs are Increasing

Kentucky's K-12 public schools spent \$160 million for energy during the 2006-07 school year.

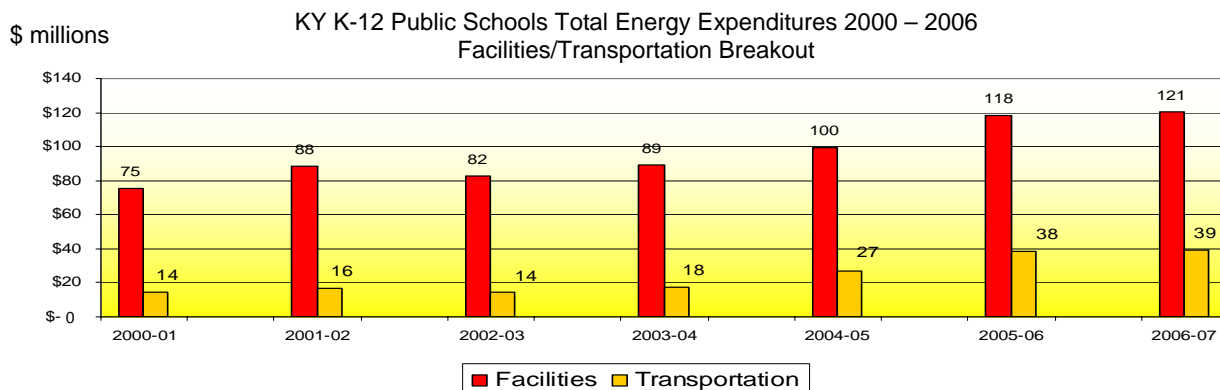


Isaac Shelby Elementary, Jefferson County

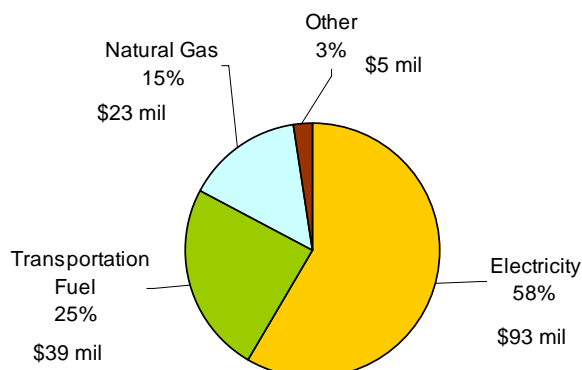
- This is \$70 million more, or 78 percent higher, than the energy costs for the 2000-01 school year and 26 percent higher than the 2004-05 school year.
- Much of this increase results from higher energy prices and increased facility use.
- Since 2000, total annual expenditures have increased an average of 13 percent each year.



- Annually, approximately 75 percent of the energy expenditures support school facilities and the remaining 25 percent pays for transportation fuels.
- Since the 2000-01 school year facility expenditures have increased by \$45 million or 60 percent and transportation costs have increased by \$25 million or more than 173 percent.



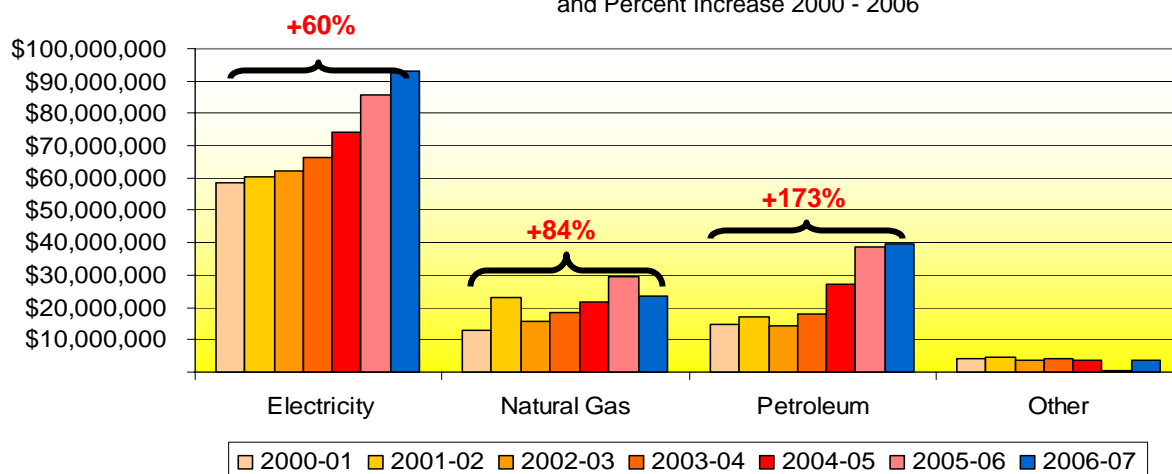
## KY K-12 Public Schools Total Energy Expenditure by Energy Type 2006-07



Energy expenses by type for the 2006-07 school year are shown on the pie chart. The top three expenses are electricity (58%), transportation fuel (25%) and natural gas (15%).

Since the 2000-01 school year electricity expenditures have increased by \$34 million (60%), natural gas by \$11 million (84%) and transportation fuel by \$25 million (173%).

KY K-12 Public Schools Total Energy Expenditure by Energy Type  
and Percent Increase 2000 - 2006



These trends reflect increases in Kentucky's energy prices.

Since 2000, Kentucky's commercial sector electricity prices have increased by 20 percent and commercial sector natural gas prices have increased by 82 percent.

Diesel fuel prices in Kentucky have increased by 98 percent since 2001.

## Energy Costs per Student at Record Highs

The Kentucky Department of Education (KDE) reporting system does not provide for recording or tracking the amount of energy used, only for the cost of energy purchased.

Because of this we are unable to compare energy consumption in actual units by dollar amount or by square foot. We know what we are paying for energy in aggregate, we just don't know how much we are buying.

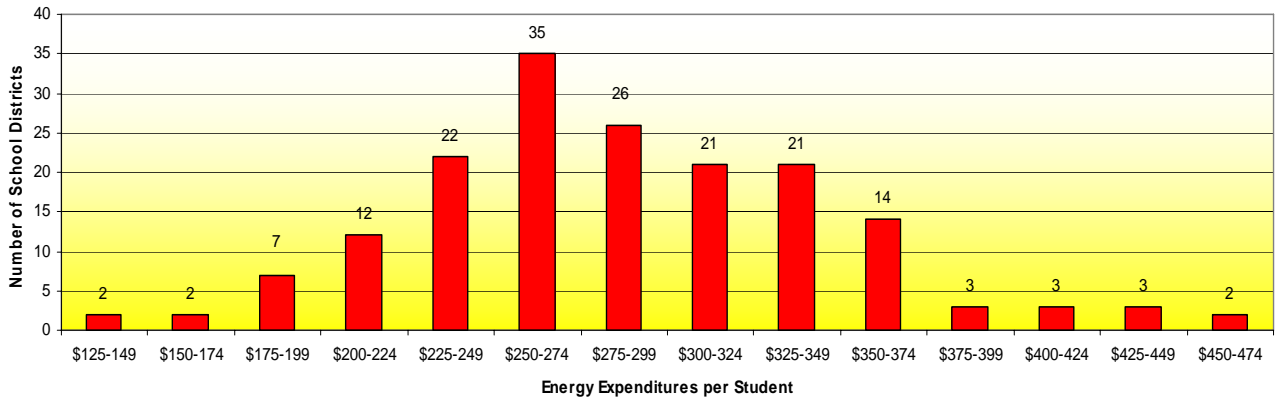
However, student attendance is collected by the KDE so we can compare energy costs per student.

Kentucky's 174 public school districts reported their 2006-07 energy expenditures to the KDE.

- Annual total energy expenditures by Kentucky public school district range from \$21 million to less than \$90,000.
- Total energy expenditures for Kentucky public school districts was \$160 million.
- The average daily attendance for Kentucky's public schools was 582,442 students for the school year.
- Dividing the total energy expenditures by the number of students results in an **average energy expense per student of \$274.**

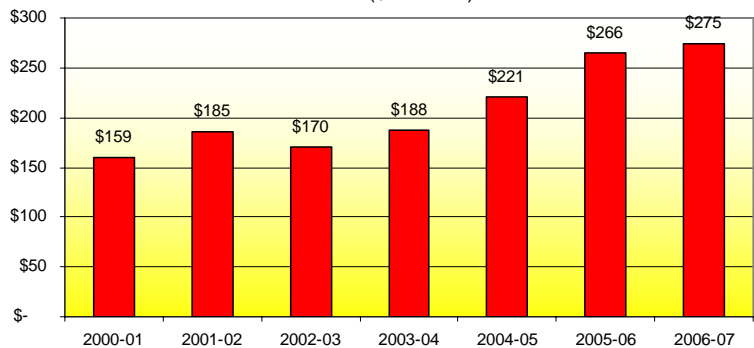
The chart below shows that the average total energy expenditure per student annually by school district ranges from \$145 to \$471 per student. This chart allows you to compare your school's energy expenditures with other school districts in Kentucky.

Annual Total Energy Expenditure per Student vs. Number of School Districts— 2006-07



Kentucky's electricity rates are 39 percent below the national average. As such, our electric bills should be lower than national averages. However, this is not the case; historically our electric bills tend to be higher than national averages. This is because our low electric prices have encouraged us to use more electricity and give little regard to energy efficiency.

KY Energy Expenditure per Student 2000-2006 (\$/Student)



Energy expenditure per student has increased by 73 percent, or \$115 per student, since the 2000-01 school year.

# ENERGY STAR helps Schools Lower Energy Costs



Some of Kentucky's school districts have developed strategies to better manage and reduce their energy expenditures. These strategies included building energy-efficient new schools and renovating existing school buildings to meet the ENERGY STAR standard.

ENERGY STAR is a federally sponsored program that promotes superior energy efficiency. Schools that achieve the ENERGY STAR label perform better than 75% of all similar buildings nationwide.

Schools participating in the ENERGY STAR program manage their energy use and track it on a kBtu\*/sq. ft./year basis.

The average energy use for Kentucky's 12 ENERGY STAR labeled public schools is 41.5 kBtu /sq. ft./year

This is approximately **45 percent less than the estimated state-wide average** use per school of 76 kBtu/sq. ft./year.

- Schools that receive the ENERGY STAR label do not have to cost more than traditionally built schools.
- Currently, there are 12 ENERGY STAR labeled schools in Kentucky.
- These schools cost significantly less to operate than conventionally built schools.
- For ENERGY STAR schools combined natural gas and electricity costs per student are 46 percent less than the state average.

ENERGY STAR labeled school buildings can reduce energy expenditures between \$20,000 and \$50,000 per year for the life of the building. With several such buildings in a district and a thirty year building life span this can represent millions of dollars. This is money that can be spent on more important school needs such as books, computers and teacher salaries.

**For more information, contact John Davies or Greg Guess, Governor's Office of Energy Policy:**

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\* kBtu – 1,000 British thermal units (btu)

